ORIGINAL

SITE SURVEY
of
PEMCO PRODUCTS

Baltimore City
(MD-055)

September 1999

Prepared by: Maryland Department of the Environment
Waste Management Administration
Sites and Brownfields Assessments/State Superfund Division
2500 Broening Highway
Baltimore, Maryland 21224

Prepared for: U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

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PEMCO PRODUCTS
Baltimore City, Maryland
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AUTHORIZATION

The Maryland Department of the Environment, Waste Management Administration (MDE) performed a site survey of Pemco Products as part of the Site Survey Initiative. This site survey was completed under the Cooperative Agreement between the MDE and the U.S. Environmental Protection Agency (EPA).[1]

SCOPE OF WORK

The Site Survey Initiative was proposed to reassess the status of those sites that were previously designated No Further Remedial Action Planned by the EPA. This initiative is intended to determine if site conditions have remained stable, provide a current description of the site and identify and address any new pathways for contamination. The initiative is also intended to enable the State to determine whether the State should recommend further investigation by EPA, oversight by the State and no further investigation by the EPA, or no further action be taken by EPA or the State and that the State designate the site as a "Formerly Investigated Site."

SITE DESCRIPTION

Pemco Products is located at 5601 Eastern Avenue in Baltimore City, Maryland. The site is located on the south side of Eastern Avenue, across the street from the Johns Hopkins Bayview Hospital (Figures 1, 2 and 3). The facility is bounded on the east by Bonsal Street and on the west by Umbra Street.[2]

The Pemco property encompasses 19.973 acres and is situated between Eastern Avenue and I-95. The company's buildings occupy the eastern part of the property. Waste disposal took place on the western and southwestern sections of the site. The dump area was originally a ravine with a small stream flowing through it (Figure 4).[3]

The waste material (frit) was dumped over the bank into the ravine. By 1979, the fill was approximately 40 feet deep and covered an area of approximately four acres. In 1979, the stream was replaced with a storm sewer.[3]

An outlet from the storm water system, which receives the permitted discharge from the plant's wastewater system, exits the plant in the southwestern corner of the property. The

discharge flows to the south as an open channel for approximately 150 ft. flowing under the railroad tracks and entering Baltimore Harbor.[4]

The Maryland grid coordinates for the site are N 529,100 ft. and E 927,875 ft. The geographic coordinates are $39^0$17'05" north latitude and $76^0$33'00" west longitude.[5]

OPERATIONAL HISTORY

The site has been used to manufacture glass and porcelain since 1910. Until 1979, porcelain and glass wastes, known as "frit," were disposed of in the ravine adjacent to the manufacturing facility. An area of approximately four acres was filled to a depth of 40 feet. The frit consists of calcinid or partly fused materials from which glass is made and can include any various complex glasses used in ground form to introduce soluble or unstable ingredients into enamels or glazes. Frit often contains concentrations of cadmium and lead plus other heavy and trace metals which are potentially leachable. The frit was disposed of on-site between 1910 and 1979. Since 1979, all wastes from Pemco have been disposed off site.[3, 5]

In 1977, Mobay Chemical, the owner of this facility at that time, submitted a Designated Hazardous Substance permit application to the State for storage and disposal of state regulated wastes.[3]

Pemco Products was issued a cleanup order by the Water Resources Administration of the Department of Natural Resources in 1979. The order requires Pemco to stop the on-site disposal of waste; remove all piles of waste material; extend storm drains through the contaminated area; cap and vegetate the fill area; and to submit analysis of all outfalls under the National Pollutant Discharge Elimination System (NPDES) permit.[5]

After receiving this order, Pemco Products replaced the open stream at the base of the landfill with a 60-inch reinforced concrete storm sewer. This was done to eliminate the contact between the waste and the stream. The 4-acre landfill was graded and a 6-8 foot clay loam cap was installed. Two monitoring wells were installed in the summer of 1979. These wells are at the top of the landfill and are approximately 20 feet deep. It is possible that the borings intersected the fringe of the landfill near the top of the ravine before entering the native soil.[3]

On August 18, 1980, Pemco Products filed a notification of hazardous waste activity with EPA as a Resource Conservation and Recovery Act (RCRA) generator, transporter and treatment facility and received facility number MD0003093499. The RCRA notification form mentions Mobay Chemical Corporation as the owner. It is not known when the change in ownership took place.[4]

A Report of Observations completed by the Department of Health and Mental Hygiene (DHMH) on August 16, 1983 shows that this facility was assigned to the Hazardous Waste Inspection Team since no determination concerning the disposition of the 1977 permit application had been made.[7]

On October 2, 1997, the plant was transferred from Miles, Inc. to the Pemco Holding Corporation. Pemco is the current owner of this site.[6]

Currently, Pemco Products is regulated as a Controlled Hazardous Substances generator under the NPDES discharge permit number 79-DP-0317 for discharge to the storm sewer, issued on December 26, 1991.[3]

PREVIOUS STUDIES

The dump area on the Pemco property was investigated due to the regulatory actions concerning this site.

A *Hazardous Waste Site Assessment Report for Pemco Products* was completed by JRB Associates in February 1982. The report provided important historical data about the site and concluded with a concern related to the potential for off-site migration of heavy metals and possibly caustics and solvents.[5]

Also in 1982, the Maryland Department of Health and Mental Hygiene performed a *Preliminary Assessment for Pemco Products*. This report addressed the concern related to the waste dumped into the ravine and the impact on the Chesapeake Bay.[6]

A *Site Inspection for Pemco Products* was performed by NUS Corporation in 1984. Elevated levels of arsenic (62 ppb), cadmium (9.3 ppb), and lead (250 ppb) were detected in a shallow monitoring well adjacent to the landfill. The Maximum Contaminant Level (May 1999) in groundwater for arsenic is 50 ppb, and is 5 ppb for cadmium. The action level for lead detected in a well serving more than 25 people is 15 ppb. Two of these contaminants, lead (150 ppb) and cadmium (1.6 ppm), were found in samples collected from seeps in the landfill area. Since there were no apparent pathways for migration of these contaminants, the report concluded that there was no threat to human health or the environment.[3]

GROUNDWATER PATHWAY

Drinking water in the area of the site is entirely obtained from the Baltimore City public water supply system. Shallow groundwater in the site area is expected to flow southeast towards the Patapsco River.[5]

SURFACE WATER PATHWAY

The on-site natural drainage has been altered. The western part of the site was originally a 50 foot deep ravine. A small stream originated at a storm sewer outlet on the southwestern part of the site. Overland surface water from the site now flows west and south through a short section of an open stream at the south end of the property. This stream flows south along the toe

of the landfill then under the railroad tracks near the site and eventually discharges into Colgate Creek, approximately 0.5 mile south of the site. Colgate Creek drains into the Patapsco River.[4,5]

No drinking water intakes are located within a 15-mile distance downstream of the site on the Patapsco River. There are no wetland frontages and other sensitive environments associated with this site. The Patapsco River is used for recreational activities.[8]

SOIL PATHWAY

Specific soil data is not available for the site area because it is within an urban area. Most of the native soils have been removed, reworked and covered with roads and buildings.

The potential exposure to the potentially contaminated soils at the site is very low since the site is capped, fenced and the access to the site is restricted. As a result, the impact of the site on population and the surrounding environment through soil exposure is minimal.

AIR PATHWAY

The population around the site was not evaluated.

RECOMMENDATIONS

Based on the information available, MDE has further requirements for the investigation of hazardous waste at this site and recommends that this site be considered for further investigation by the EPA under a future Cooperative Agreement. Additional investigation is needed to determine if site conditions have remained stable and whether there is any discharge of contaminated groundwater from the landfill to the Patapsco River.

REFERENCES

1 MDE, 1998, Cooperative Agreement V-993522-01-0 between EPA/Region III and MDE/Superfund Pre-Remedial Program.

2 ADC, 1995, ADC's Street map of Baltimore City & County, Maryland.

3 NUS, 1984, Site Inspection of Pemco Products (MD-055).

4 MDE, Waste Management Administration, Data on File.

5 USGS, 1953, 7.5 Minute Topographic Map, Baltimore East, MD Quadrangle, Photorevised 1974.

6 DHMH, 1982, Preliminary Assessment for Pemco Products.

7 DHMH, 1983, Report of Observations.

8 DOI, 1981, 7.5 Minute National Wetlands Inventory, Baltimore East, MD Quadrangle.

Figure 1 - Regional Highway Map

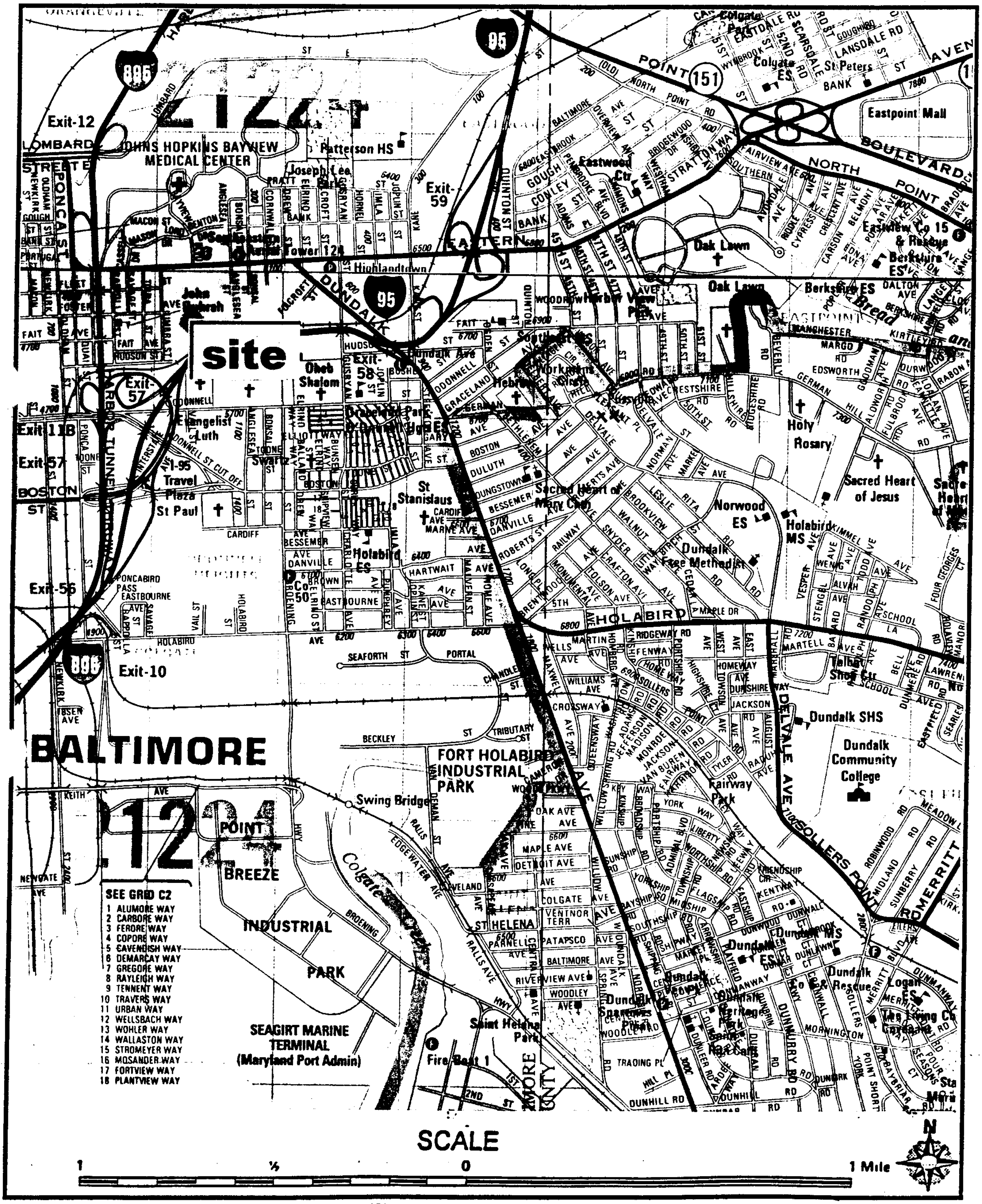


Figure 2 - Street Map

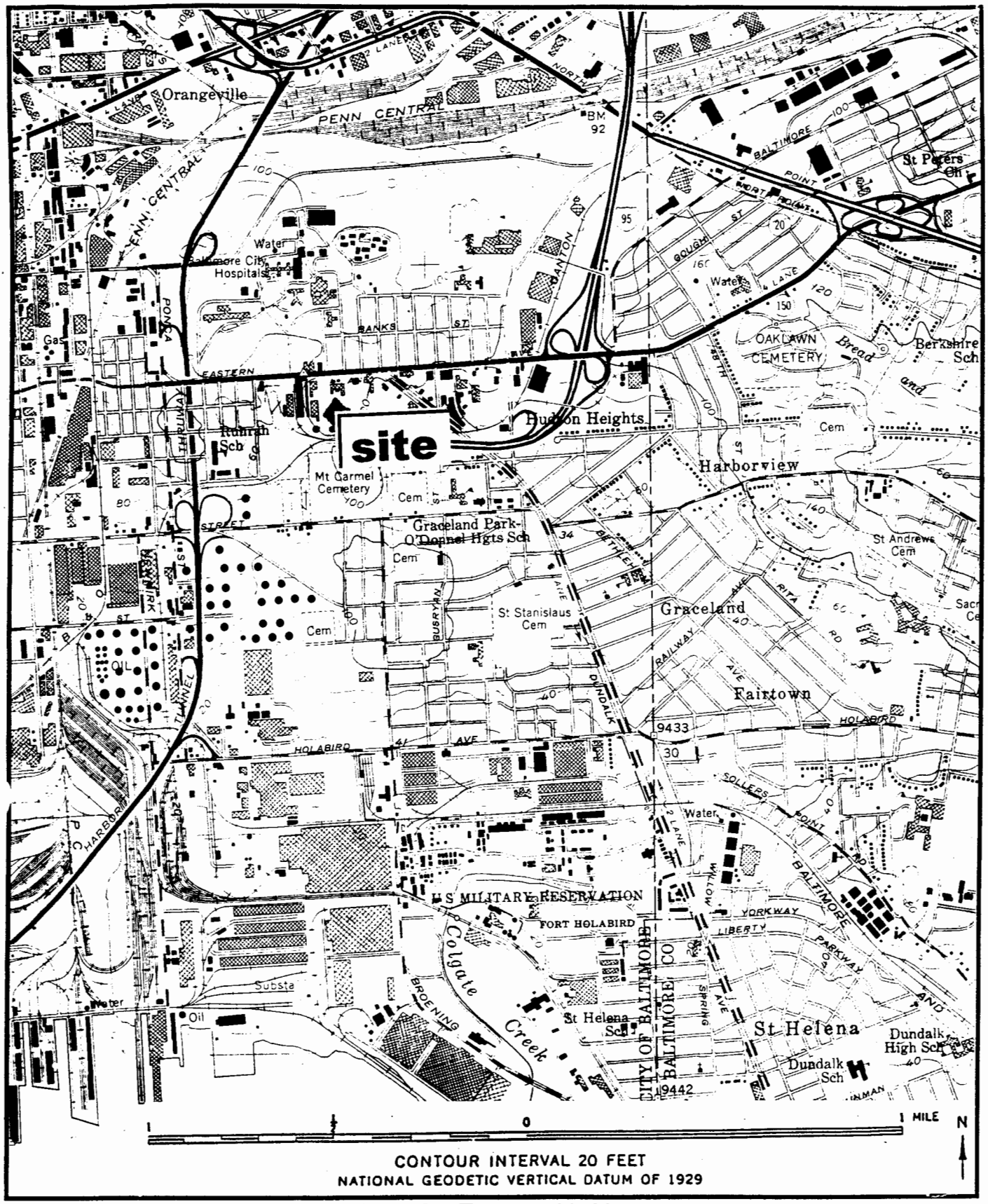
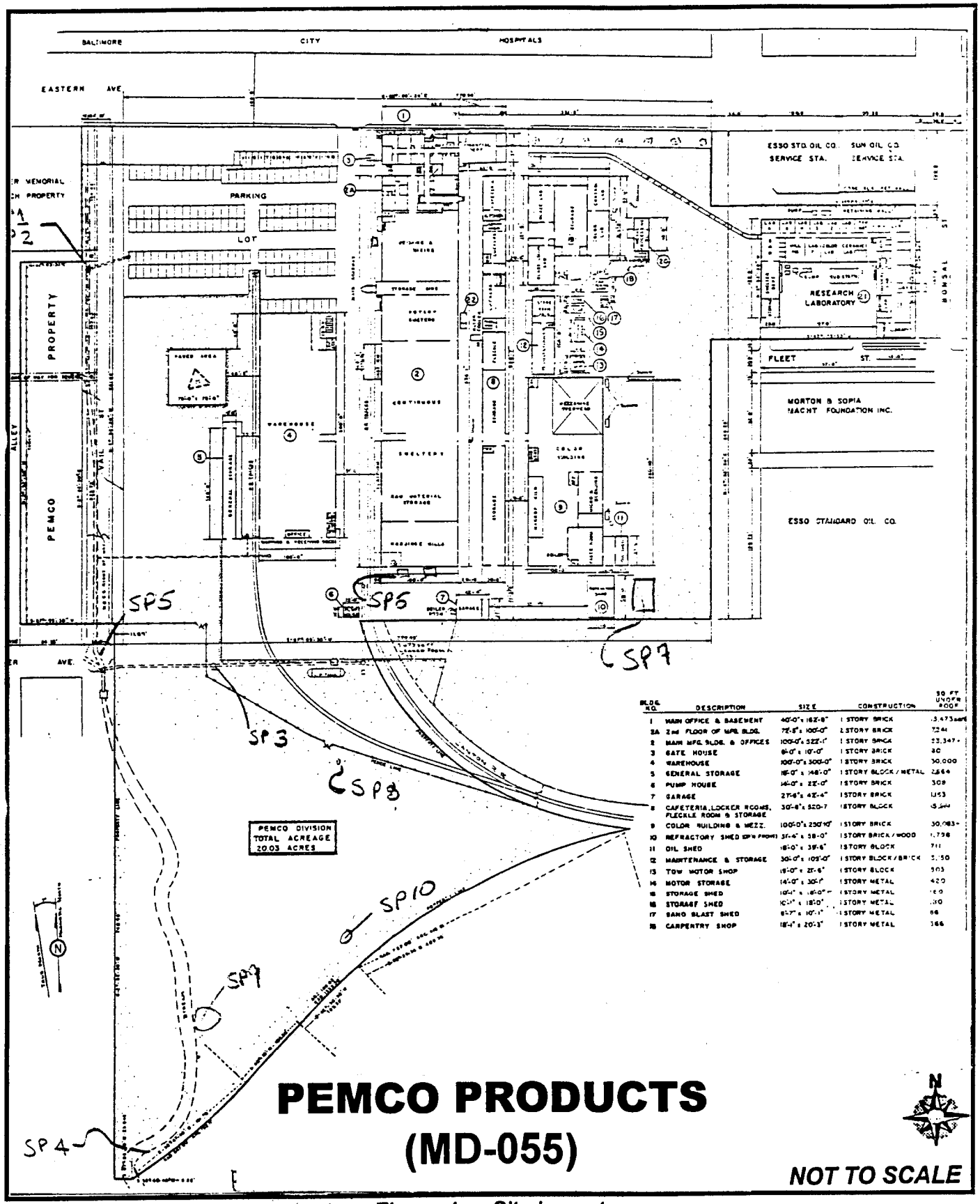


Figure 3 - Topographic Map



BLDG. NO.	DESCRIPTION	SIZE	CONSTRUCTION	SQ. FT. UNDER ROOF
1	MAIN OFFICE & BASEMENT	40'-0" x 162'-8"	1 STORY BRICK	13,473 sq ft
2A	2nd FLOOR OF MFR. BLDG.	72'-8" x 100'-0"	2 STORY BRICK	7241
2	MAIN MFG. BLDG. & OFFICES	100'-0" x 522'-1"	1 STORY BRICK	53,347+
3	GATE HOUSE	8'-0" x 10'-0"	1 STORY BRICK	80
4	WAREHOUSE	100'-0" x 300'-0"	1 STORY BRICK	30,000
5	GENERAL STORAGE	116'-0" x 148'-0"	1 STORY BLOCK / METAL	2564
6	PUMP HOUSE	14'-0" x 22'-0"	1 STORY BRICK	308
7	GARAGE	27'-9" x 42'-4"	1 STORY BRICK	1153
8	CAFETERIA, LOCKER ROOMS, FLECKLE ROOM & STORAGE	30'-8" x 520-7	1 STORY BLOCK	15,944
9	COLOR BUILDING & MEZZ.	100'-0" x 250'-10"	1 STORY BRICK	30,083+
10	REFRACTORY SHED (D'n FROM)	37'-4" x 58'-0"	1 STORY BRICK / WOOD	1,798
11	OIL SHED	18'-0" x 39'-8"	1 STORY BLOCK	711
12	MAINTENANCE & STORAGE	30'-0" x 105'-0"	1 STORY BLOCK / BRICK	3,150
13	TOW MOTOR SHOP	19'-0" x 27'-6"	1 STORY BLOCK	503
14	MOTOR STORAGE	14'-0" x 30'-1"	1 STORY METAL	420
15	STORAGE SHED	10'-1" x 16'-0"	1 STORY METAL	160
16	STORAGE SHED	10'-1" x 18'-0"	1 STORY METAL	180
17	SAND BLAST SHED	8'-7" x 10'-1"	1 STORY METAL	86
18	CARPENTRY SHOP	18'-1" x 20'-3"	1 STORY METAL	366

Figure 4 - Site Layout

Real Property Information

Maryland Department of Assessments and Taxation
Real Property System

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BALTIMORE CITY

WARD: 26 SEC: 01 BLOCK: 6694 LOT: 028

Owner Information

Owner Name: PEMCO HOLDING CORP. **Use:** INDUSTRIAL

Mailing Address: 5601 EASTERN AVE
BALTIMORE MD 21224-2726 **Principal Residence:** NO

Transferred From: MILES, INC. **Date:** 10/02/1997 **Price:** $2,400,000

Deed Reference: 1) SB/ 6722/ 1
2)

Special Tax Recapture:

* NONE *

Tax Exempt: NO

Location Information [Map unavailable for Baltimore City]

Premise Address:	Zoning:	Legal Description:
5601 EASTERN AVE BALTIMORE 21224-2726	M030	19.973 ACRES

Map	Grid	Parcel	Subdiv	Sect	Block	Lot	Group	Plat No:
26				1	6694	28	81	Plat Ref:

Special Tax Areas **Town:**

Ad Valorem:

Primary Structure Data

Year Built:	Enclosed Area:	Property Land Area:	County Use:
0000			28500

Value Information

	Base Value	Current Value	Phase-In Value	Phase-in Assessments	
		As Of 01/01/1999	As Of 07/01/1999	As Of 07/01/1998	As Of 07/01/1999
Land:	903,380	903,380			
Impts:	1,780,650	1,500,000			
Total:	2,684,030	2,403,380	2,403,380	1,073,610	961,350
Pref Land:	0	0	0	0	0

Partial Exempt Assessments

	Code	07/01/1998	07/01/1999
County	000	0	0
State	000	0	0
Municipal	000	0	0

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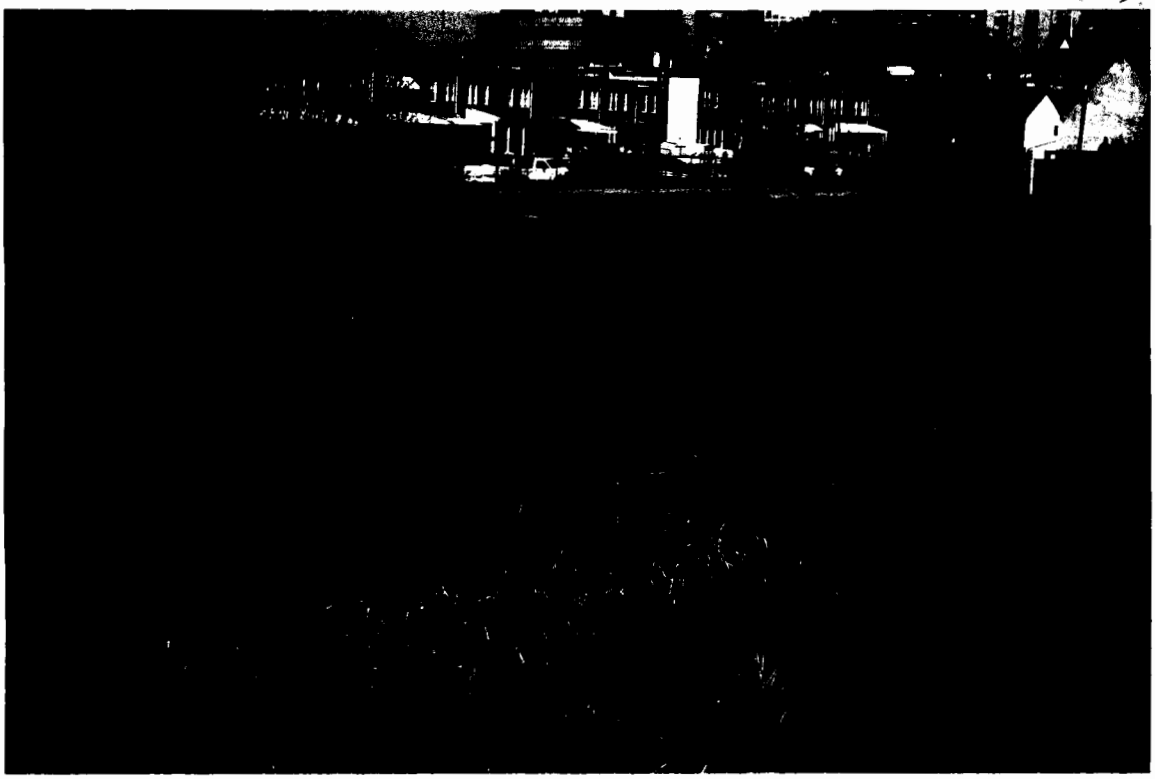

Figure 1 - The Northwestern Portion of the Former Landfill.

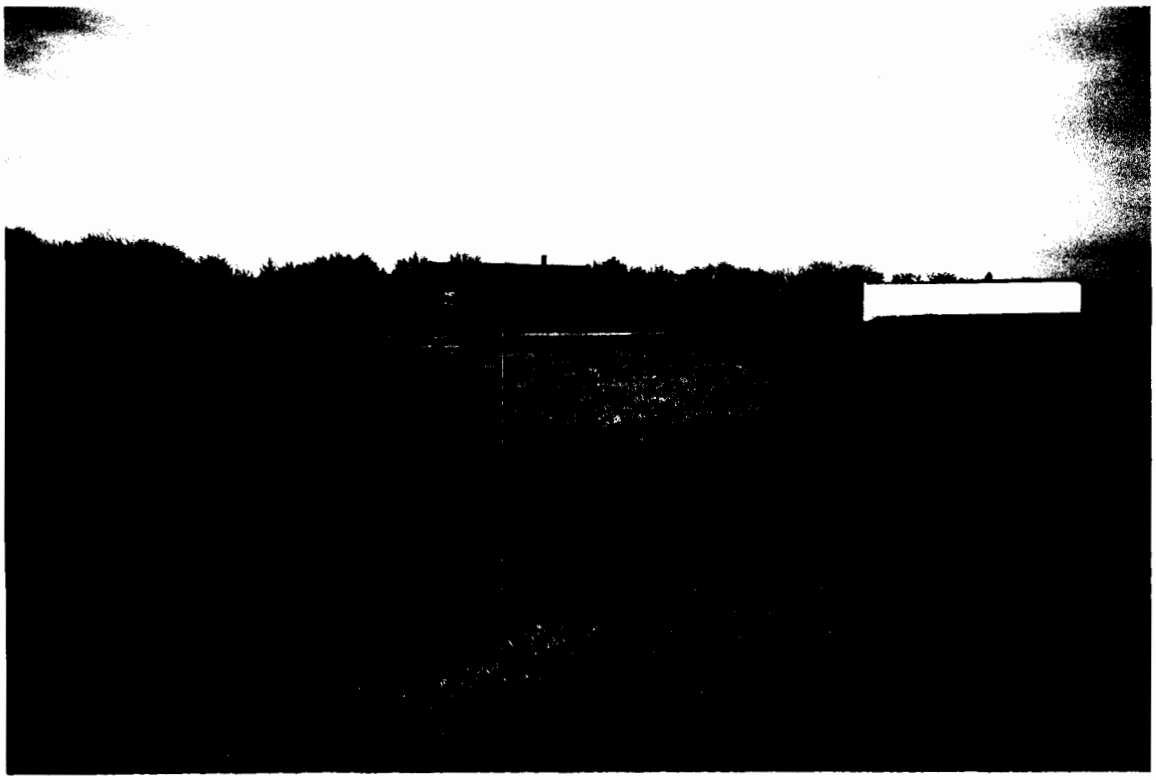

Figure 2 - The Central Portion of the Former Landfill.
Photo Facing West.

ORIGIN

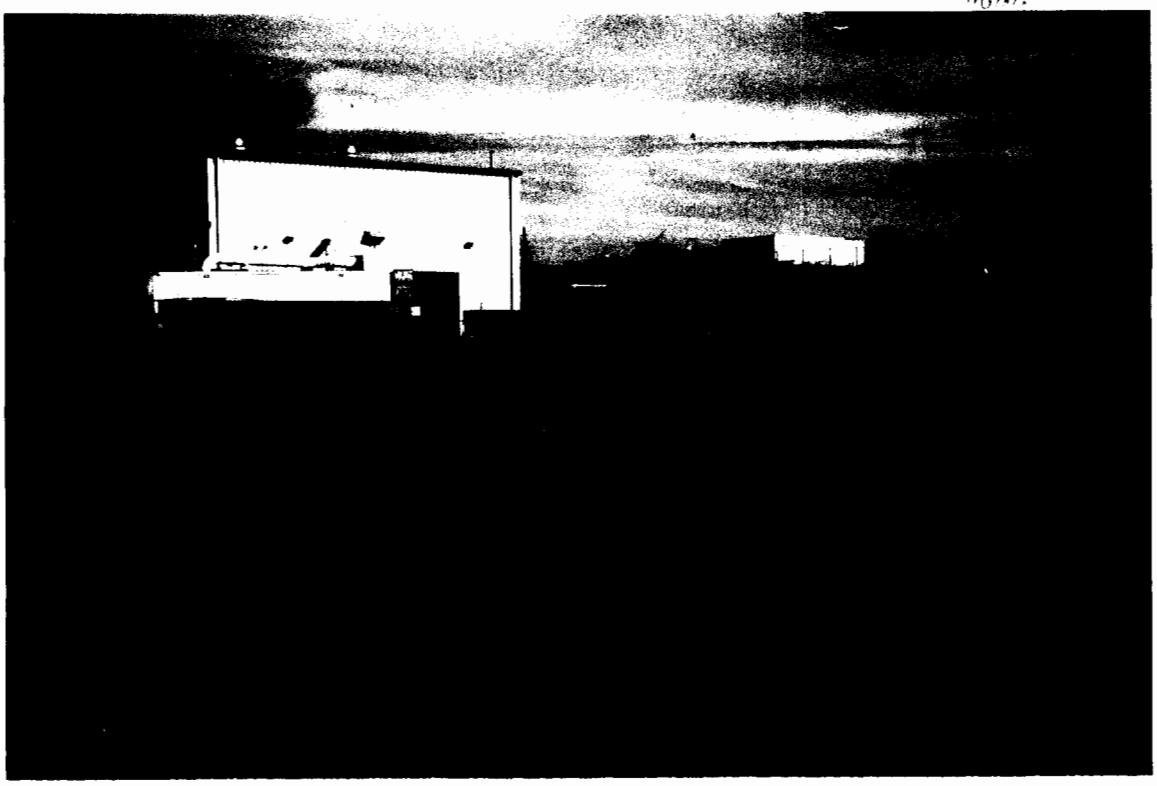

Figure 3 - The Northern Portion of the Former Landfill.

Figure 4 - The Northeastern Portion of the Former Landfill.

ORIGINAL
(Red)

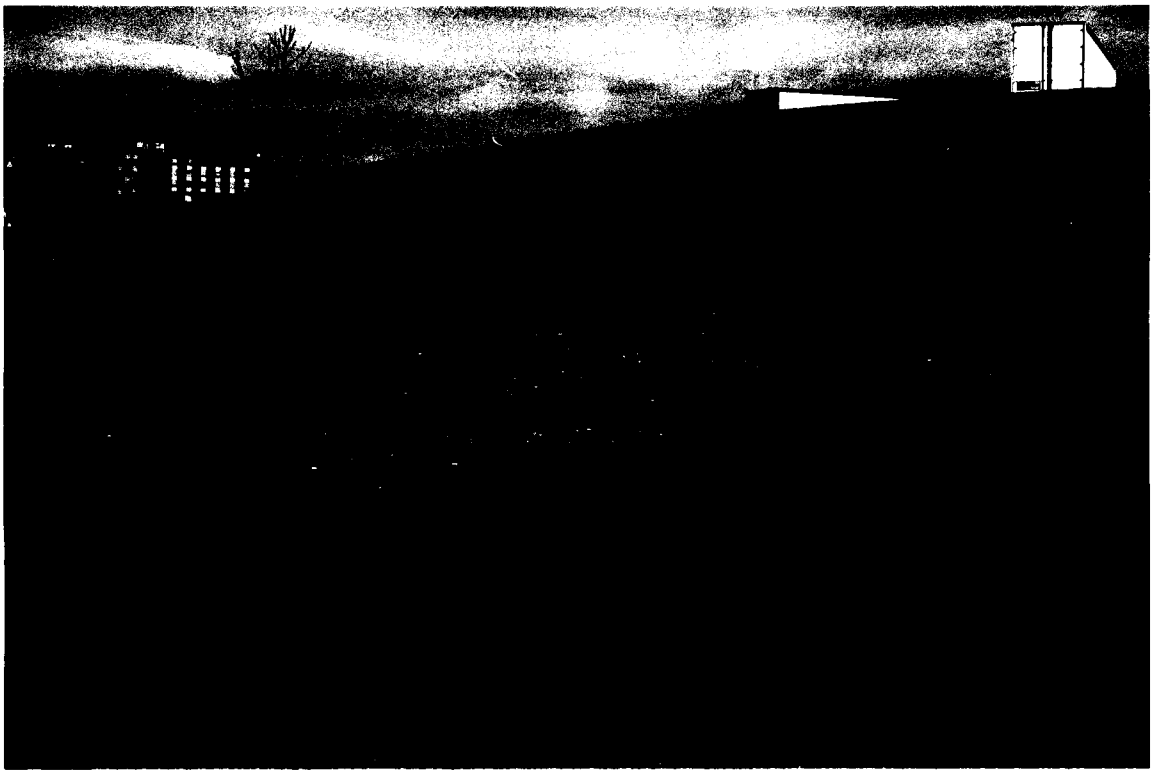

Figure 5 - The Southwestern Portion of the Former landfill.

Figure 6 - The Southern Portion of the Former Landfill Along the Interstate I-95. Photo Facing West.

ORIGINAL
(Red)

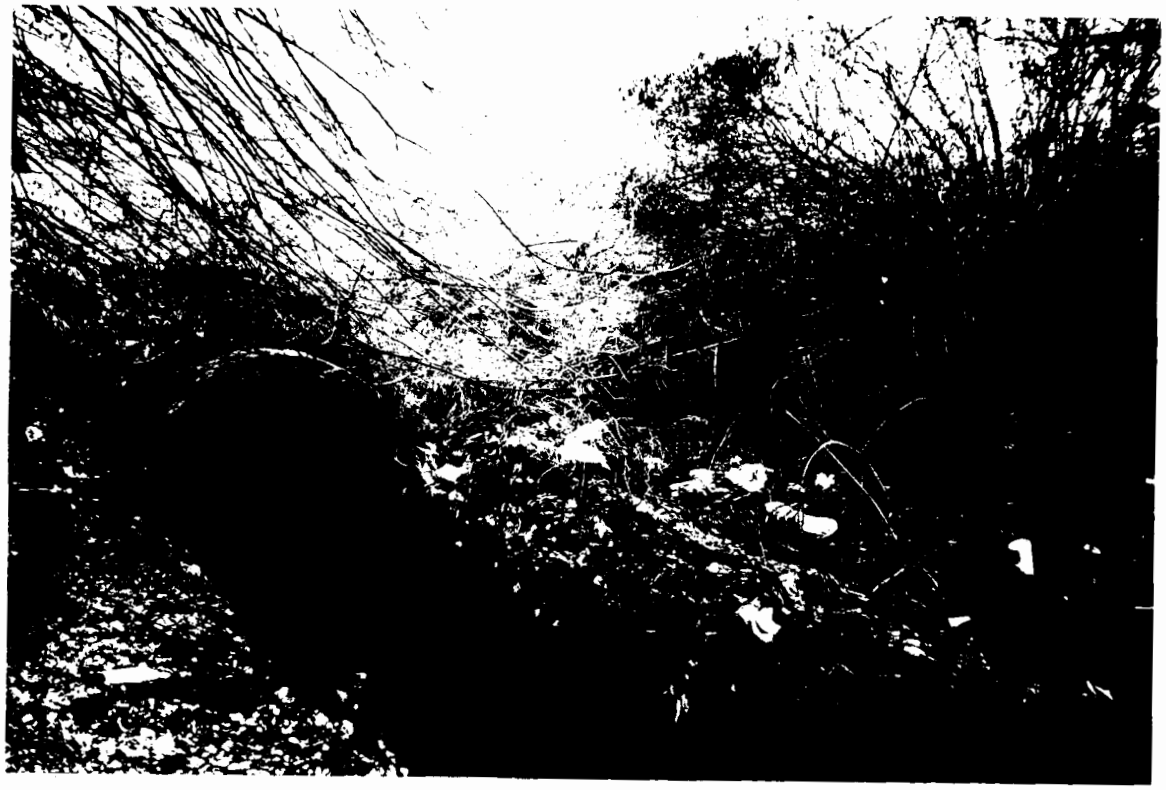

Figure 7 - The on-site Outlet of the Runoff Sewage.

Figure 8 - The on-site Wastewater Treatment System.